Connecting Remote Communities in Canada with Green Air Travel

GREYJAY Advocacy Group
Montreal, Qc.

Who We Are

A Montreal-based advocacy group to promote Regional Air Mobility (RAM) policies that are equitable, ethical, and ecofriendly in Canada.

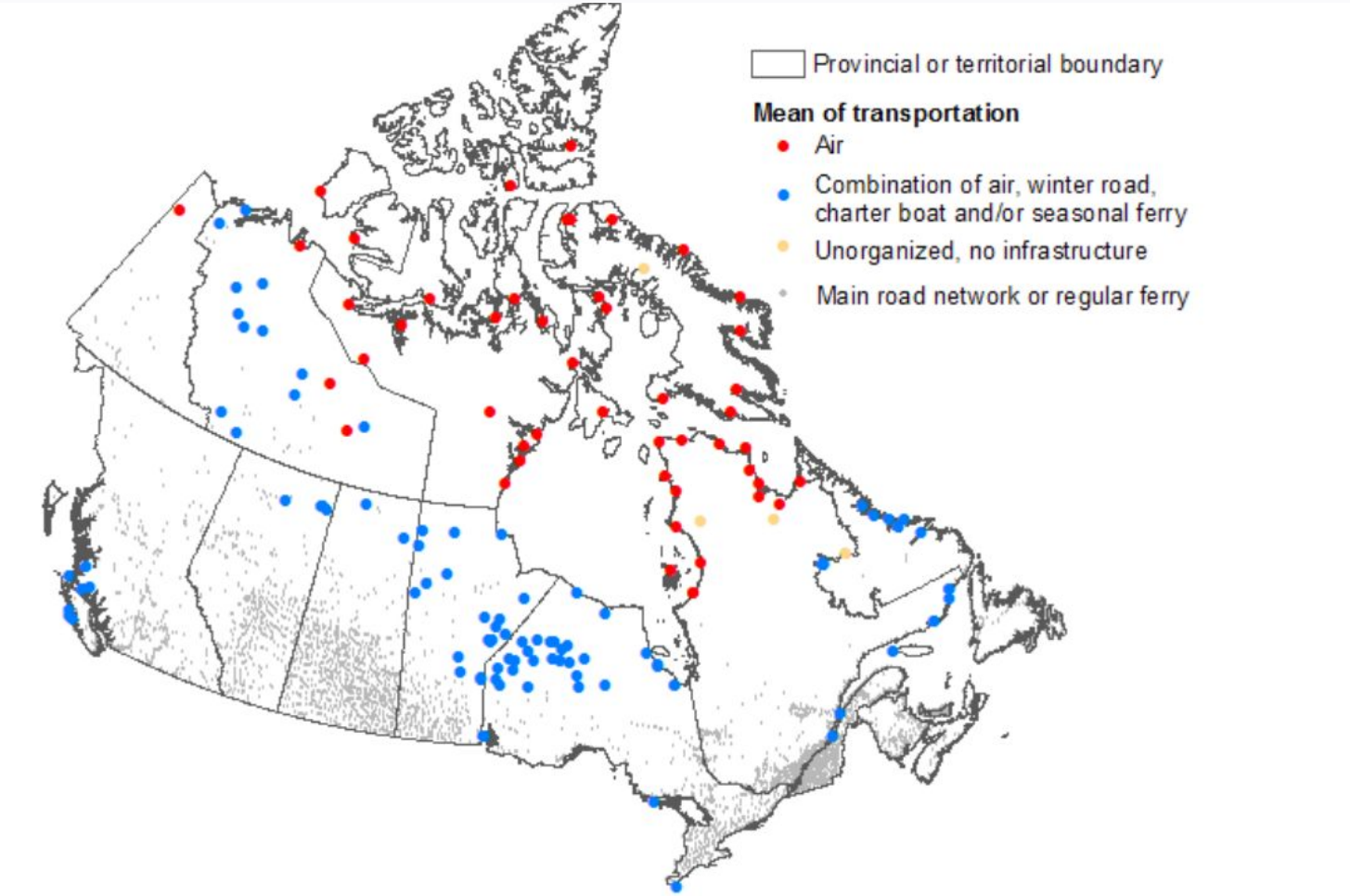
Our mission is to encourage Canadian policy makers to create the first government-owned (public) fleet of green (electric or hydrogen based) airplanes by 2030 to serve remote and indigenous communities.

GREYJAY

Motivation:
Air transport is the only viable way to access many rural Canadian communities.

Data from Statistics Canada shows that air travel is the only way to reach 191 Canadian communities (shown as red and blue dots). There is no road or ferry network connecting these communities to other population centers.

Limited access to air transport would translate into limited access to health financial, legal services and retail services for the people living in these areas in Canada.



Motivation:
Despite government investments, air transportation to/from rural communities stays unaffordable for many residents.

Thanks to vast land size and extreme weather, and sparse population of Canada, air transport operation is expensive in Canada. This is especially true for remote communities. High costs for the air transport operators means high fare prices for consumers.

To make the travel more affordable provincial and local governments subsidies 50% to 75% of eligible flights to remote communities for residents. In 2018, Quebec government spent $173 million to reduce air travel cost for residents these communities, $73 mil in subsidies alone.

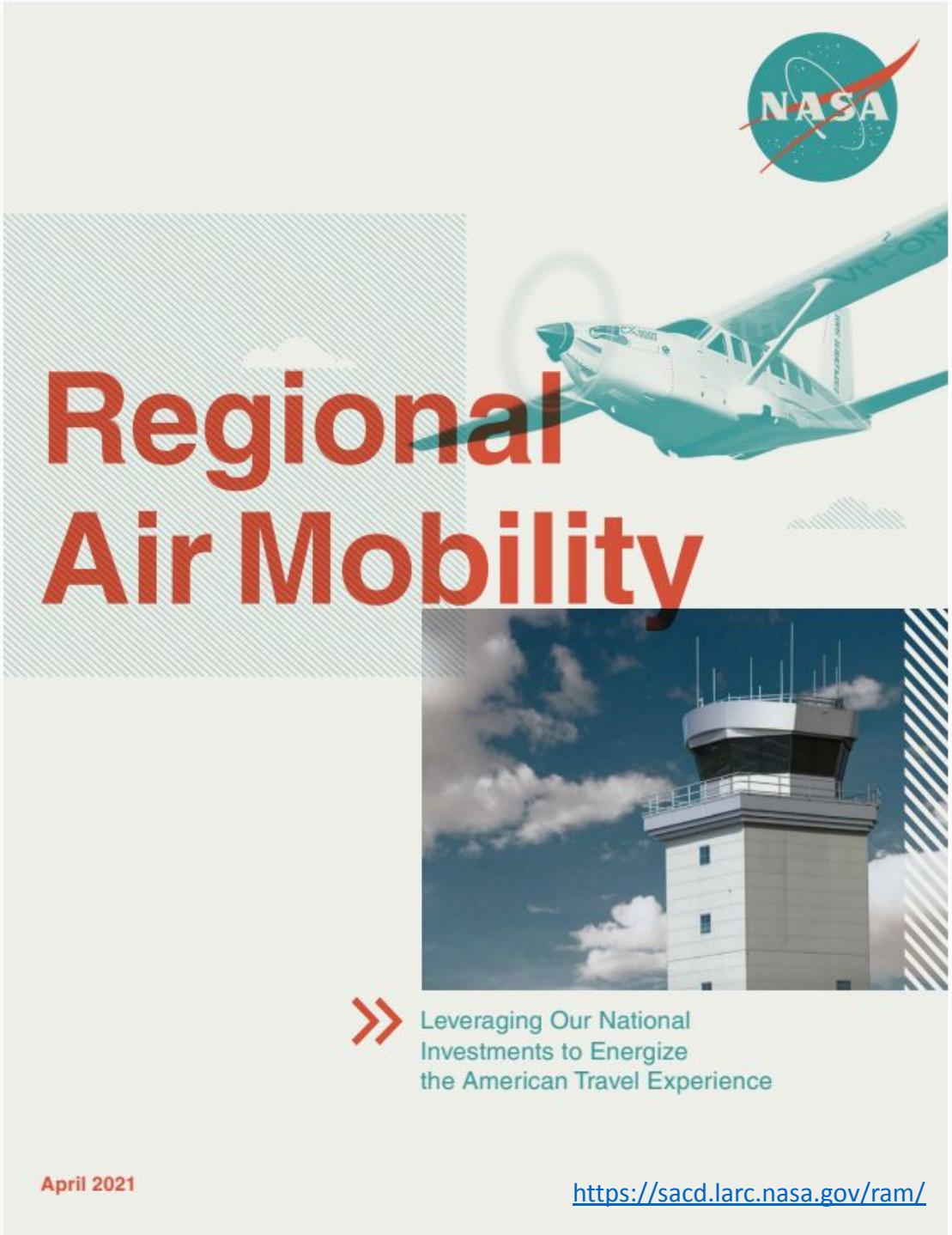
Despite these, the cost of air travel to remote communities stays very high. Survey of household spending in 2019 shows that the average air travel household expenditure for a family living in major Canadian cities was $1,214. Meanwhile, families living in Iqaluit paid $4,292 for the air transport related expenses.

What can help:
Regional Air Mobility (RAM):

Regional Air Mobility (RAM) focuses on building upon existing airport infrastructure to transport people and goods using innovative aircraft that offer a huge improvement in efficiency, affordability, and community-friendly integration over existing regional transportation options

It may all sound like a fictional episode of The Jetsons, but these technologies will be commonplace in our near future. Already in 2022, several prototypes are being tested including a few in Quebec (building smaller size electric planes) , and countries and airlines started to order their fleets.

Promising to be significantly cheaper and greener than current airplanes, they offer an exciting chance to to revolutionize the public transport system, as early as 2030 to address the inequity in access to air travel today.



Solution:
Gray Jay - Green Air Travel for Remote Communities in Canada

Gray Jay is a public fleet of small green (electric or hydrogen based) aircraft. These planes would fly between indigenous reserves and remote communities, would transport people and cargo, can be used for many use cases such as traveling to hunting camps, transporting patients, emergency response and bringing food and necessitates to communities. They serve the destinations that are infrequently served by highly subsidized air transport. They will use local airports with access to electricity and charging facilities.

They are replacement for services like Greyhound buses for the next 50 to 100 years.

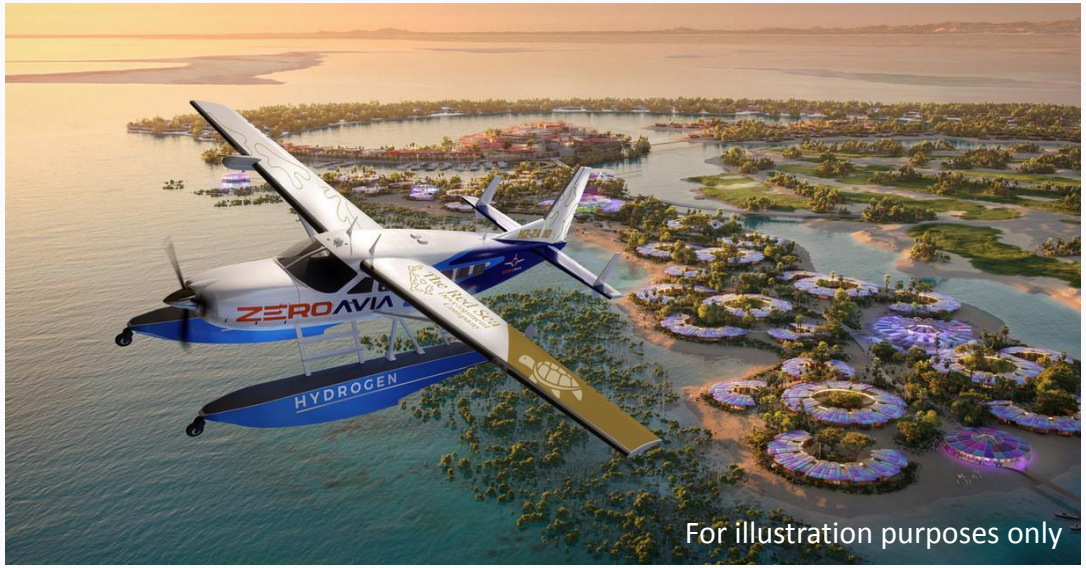
Heart aerospace a Swedish company is manufacturing 19 person electric airplanes able to take off from short runways.
https://heartaerospace.com/

Solution:
Gray Jay– owned and maintained by government, operated by communities

GrayJay fleet will be owned and maintained by a public sector agency, most probably a federal entity as air transportation falls under federal government jurisdiction. Canada Post and Greyhound are two organizations with similar type of service (aka Canada-wide, subsidized, serving rural areas).

This agency can operate these fleets or work with companies such as regional airlines which have been serving the rural communities for the operation.

During the next 10 years, this agency will work closely with Canadian and international air framers and manufacturing companies to ensure perfect aircrafts are ordered for Canadian needs.



ZeroAvia's (a UK based company) mission is a hydrogen-electric, zero-emission powertrain for 19-seat regional trips to over 100-seat long-distance flights
https://www.zeroavia.com/

Benefits for many across Canada

Direct Benefit for residents

quicker and cleaner access to services such as hospitals. More variety of essential goods for lower price. Supporting indigenous tradition of hunting camps

Indirect benefit to other governmental agencies

reducing the need for good subsidies. Reducing the cost of transporting patients and other residence to main cities for governmental agencies such as ministries of health, minister of education, etc.

Indirect benefits for communities

Operating and maintaining aircrafts will be source for good paying jobs for remote communities.

Indirect benefits for Canada

more equity across Canada including rural communities. building these airplanes in Canada create good paying jobs. Removing trucks and other planes of these routes would reduce emission. Canada can export their experience and expertise in operating such fleets

Costs to purchase the initial fleet (in 2030) is $500 million to $1.0 billion

$4 mil - $8 mil - Cost per plane

Above is a rough estimate based on sparse information on web. Given, the companies are in their early stages, there is little accurate info available on the cost of regional air mobility planes. However, it is expected that the cost is a fraction of the price of a traditional aircraft (price of a BOMBARDIER Q400 is $12 million)

The fact that these companies are in the early stages provide Canadian government with a great opportunity to start investing in viable options built in Canada. This is what Swedish government has done with Heart Aerospace. This should allow Canada to purchase the planes for reasonable cost in future.

130 planes - Initial size of Gray Jay fleet

According to Stat Canada, there are currently 1300 medium weight commercially registered planes in Canada for cargo and passenger transport (excluding heavy jets for long haul flights).

For purpose of this study, we assume the initial size of Gray Jay Fleet is 10% of all available medium size aircraft in Canada.

Why not just help electrify / hydrogenate regional airlines?

- Several regional airlines in Canada started to look at other type of engine that create less emission. Harbour Air serving coastline of British Columbia is a bright example of these airlines that was even featured in Nasa's report on Regional Air Mobility.

- This means the regional aviation is going to become greener and cheaper to operate. If current business model stays unchanged, electric or hydrogen based regional aviation would probably mostly mean higher profit margin for the operators which is great for an industry operating in single percent of profit margin today.

- However, we have little reason to believe flying to and from remote communities will become more equitable. This is the reason we think we need a publicly owned fleet/operation to fill the gap and make flying accessible to working class.

Harbour Air's electric DHC-2 proof-of-concept prototype, dubbed the eBeaver. Harbour Air Photo

What is next?
Make Gray Jay Part of Federal conversation

Our next step is to ask the federal parties to include the motion on the right or motions similar to this in their platform.

<u>A Call For Public and Electric or Hydrogen-Based Fleet of Planes</u>

Whereas air transport is the only viable way to access many rural Canadian communities;

Whereas air transportation to rural communities remains unaffordable for many—sometimes reaching four times the price of the average flight between major Canadian cities—in spite of government investments;

Whereas several prototypes of small size electric planes are being tested, and countries and airlines have started to order fleets, but there are no plans to make greener air travel more equitable;

Be it resolved that after appropriate and respectful consultation with impacted communities, the Party support the emerging regional air mobility network known as Gray Jay that aims to set up a public fleet of 130 small electric or hydrogen based airplanes, which would be owned by the government and operated by communities, particularly Indigenous communities.

Public libraries, public post system, public health care, public transit, public schools ...

Sometimes we need a public agency for a service and we believe green reliable affordable air transport to rural and indigenous communities is one of those times.

Thanks!

We'd love to hear your feedback.

Credits :
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